

Data sheet for SINAMICS G120X

Article No.: 6SL3220-1YH62-0CP0

Client order no. : Order no.: Offer no. : Remarks :

Rated data			
Input			
Number of phases 3 AC			
Line voltage	500 690 V +1	0 % -10 %	
Line frequency	47 63 Hz		
Rated voltage 690V IEC		600V NEC	
Rated current (LO)	489.00 A	526.00 A	
Rated current (HO)	410.00 A	440.00 A	
Output			
Number of phases	3 AC		
Rated voltage	690V IEC	600V NEC 1)	
Rated power (LO)	450.00 kW	500.00 hp	
Rated power (HO)	400.00 kW	450.00 hp	
Rated current (LO)	470.00 A	487.00 A	
Rated current (HO)	394.00 A	423.00 A	
Rated current (IN)	516.00 A		
Max. output current	682.00 A		
Pulse frequency	2 kHz		
Output frequency for vector cor	ntrol 0 100 Hz		
Output frequency for V/f contro	0 100 Hz		
Overload canability			

Overload capability

Low Overload (LO)

110% base load current IL for 60 s in a 300 s cycle time

High Overload (HO)

150% x base load current IH for 60 s within a 300 s cycle time

General tech. specifications			
Power factor λ	0.75 0.93		
Offset factor $\cos\phi$	0.96		
Efficiency η	0.98		
Sound pressure level (1m)	74 dB		
Power loss 3)	8.840 kW		
Filter class (integrated)	RFI suppression filter for Category C3		
EMC category (with accessories)	Category C3		
Safety function "Safe Torque Off"	without SIRIUS device (e.g. via S7- 1500F)		

Communication

CommunicationPROFIBUS DP



Item no. : Consignment no. : Project :

Inputs /	outputs	
Standard digital inputs		
Number	6	
Switching level: $0 \rightarrow 1$	11 V	
Switching level: $1 \rightarrow 0$	5 V	
Max. inrush current	15 mA	
Fail-safe digital inputs		
Number	1	
Digital outputs		
Number as relay changeover contact	2	
Output (resistive load)	DC 30 V, 5.0 A	
Number as transistor	0	
Analog / digital inputs		
Number	2 (Differential input)	
Resolution	10 bit	
Switching threshold as digital input		
0 → 1	4 V	
1 → 0	1.6 V	
Analog outputs		
Number	1 (Non-isolated output)	
PTC/ KTY interface		

1 motor temperature sensor input, sensors that can be connected PTC, KTY and Thermo-Click, accuracy ±5 °C

Closed-loop control techniques			
V/f linear / square-law / parameterizable	Yes		
V/f with flux current control (FCC)	Yes		
V/f ECO linear / square-law	Yes		
Sensorless vector control	Yes		
Vector control, with sensor	No		
Encoderless torque control	No		
Torque control, with encoder	No		



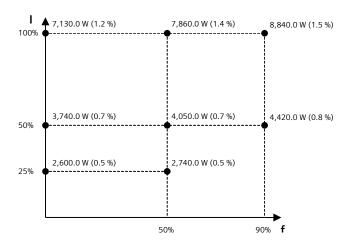
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Ambie	ent conditions			
Standard board coating type	Class 3C2, according to IEC 60721-3-3: 2002			
Cooling	Air cooling using an integrated fan			
Cooling air requirement	0.362 m ³ /s (12.784 ft ³ /s)			
Installation altitude	1,000 m (3,280.84 ft)			
Ambient temperature				
Operation	0 45 °C (32 113 °F)			
Transport	-40 70 °C (-40 158 °F)			
Storage	-25 55 °C (-13 131 °F)			
Relative humidity				
Max. operation	95 % At 40 °C (104 °F), condensation and icing not permissible			
Connections				
Signal cable				
Conductor cross-section	0.15 1.50 mm² (AWG 24 AWG 16)			
Line side				
Version	M12 screw			
Conductor cross-section	4 x 240.00 mm ² (MCM 2 x 500 MCM 4 x 500)			
Motor end				
Version	M12 screw			
Conductor cross-section	4 x 240.00 mm ² (MCM 2 x 500 MCM 4 x 500)			
DC link (for braking resistor)				
PE connection	M12 screw			
Max. motor cable length				
Shielded	150 m (492.13 ft)			

	Mechan	ical data		
Degree of protection IP20 / UL open type		IP20 / UL open type		
F	rame size	FSH		
N	let weight	162 kg (357.15 lb)		
Dimensions				
	Width	548 mm (21.57 in)		
	Height	1,695 mm (66.73 in)		
	Depth	393 mm (15.47 in)		
	Stand	dards		
Compliance with standards UL, cUL, CE, C-Tick (RCM), EAC, KC SEMI F47, REACH		UL, cUL, CE, C-Tick (RCM), EAC, KCC, SEMI F47, REACH		
CE marking		EMC Directive 2004/108/EC, Low- Voltage Directive 2006/95/EC		

Converter losses to IEC61800-9-2*		
Efficiency class	IE2	
Comparison with the reference converter (90% / 100%)	37.8 %	



The percentage values show the losses in relation to the rated apparent power of the converter.

The diagram shows the losses for the points (as per standard IEC61800-9-2) of the relative torque generating current (I) over the relative motor stator frequency (f). The values are valid for the basic version of the converter without options/components.

*calculated values

¹⁾ The output current and HP ratings are valid for the voltage range 550V-600V

³⁾Typical value. More information can be found in the element group "Converter losses to IEC 61800-9-2" in this datasheet.



MLFB-Ordering data

6SL3000-0CH36-0AA0



Figure similar

 Client order no. :
 Item no. :

 Order no. :
 Consignment no. :

 Offer no. :
 Project :

Offer no. : Francisco : Franci

Rated data		Connections	
Input			
Number of phases	3 AC		
Line voltage	500 690 V		
Output		Load side	
Rated current	597.0 A	Version 1 x	hole for M12
Mechanical data			
Dimensions			
Width	350.0 mm (13.8 in)	PE connection	
Height	321.0 mm (12.6 in)	Version M6	screw
Depth	232.5 mm (9.2 in)		
Degree of protection	IP00		
Net weight	63.8 kg (141.0 lb)		